

AMENDMENT

LISTING OF CLAIMS:

The following listing supplants all prior listings of the claims.

Before considering the application and calculating the fee, please amend the claims as follows. This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A method of generating power via a gas turbine and a steam turbine which comprises:

A. operating in a first mode by:

a. supplying coal bed methane, an oxygen-containing gas, and flue gas produced in the gas turbine, all under pressure, to a combustor of the gas turbine and combusting the coal bed methane and using the heated combustion products and the flue gas to drive the gas turbine;

b. supplying a hot flue gas stream produced in the gas turbine to a heat recovery steam generator and using the heat of the flue gas to generate steam by way of heat exchange with water supplied to the steam generator;

c. ~~supplying~~ supplying steam from the steam generator to a steam turbine and using the steam to drive the steam turbine; and

d. supplying (i) a part of the flue gas stream from the gas turbine that passes through the heat recovery steam generator to the combustor of the gas turbine and (ii) another part of the flue gas stream from the gas turbine that passes through the heat recovery steam generator to a suitable underground storage region; and

B. operating in a second mode by:

a. supplying coal bed methane and air from an air compressor of the gas turbine, both under pressure, to a combustor of the gas turbine and combusting the coal bed methane and using the heated combustion products and the flue gas to drive the gas turbine;

- b. supplying a hot flue gas stream produced in the gas turbine to a heat recovery steam generator and using the heat of the flue gas to generate steam by way of heat exchange with water supplied to the steam generator;
 - c. supplying steam from the steam generator to a steam turbine and using the steam to drive the steam turbine.
2. (Original) The method defined in claim 1 wherein the oxygen-containing gas supplied to the combustor of the gas turbine in operating mode (A) is oxygen.
3. (Currently Amended) The method defined in claim 1 or claim 2 wherein the flue gas stream supplied to the combustor of the gas turbine in operating mode (A) is predominantly CO₂.
4. (Currently Amended) The method defined in ~~any one of the preceding claims~~ claim 1 wherein step (d) of operating mode (A) includes supplying part of the CO₂-containing flue gas stream to the combustor of the gas turbine and the remainder of the flue gas stream to the underground storage.
5. (Currently Amended) The method defined in ~~any one of the preceding claims~~ claim 1 wherein step (d) of operating mode (A) includes supplying the flue gas stream to the underground storage region as a liquid phase.
6. (Currently Amended) The method defined in ~~any one of the preceding claims~~ claim 1 wherein the underground storage region is a coal bed seam.
7. (Original) The method defined in claim 6 wherein the underground storage region is the coal bed seam from which coal bed methane to power the gas turbine is extracted.

8. (Original) The method defined in claim 7 wherein step (d) includes supplying the flue gas stream to the underground storage region via existing well structures for extracting coal bed methane from the underground storage region.

9. (Currently Amended) The method defined in ~~any one of the preceding claims~~ claim 1 wherein step (d) of operating mode (A) includes separating water from the flue gas.

10. (Currently Amended) The method defined in ~~any one of the preceding claims~~ claim 1 wherein step (d) of operating mode (A) includes:

- i. compressing the flue gas stream to a first pressure (~~typically 20-30 bar~~); and
- ii. supplying one part of the compressed flue gas stream to the combustor of the gas turbine.

11. (Currently Amended) The method defined in claim 10 wherein step (d) of operating mode (A) further includes:

- i. compressing another part of the compressed flue gas stream to a second, higher pressure (~~typically at least 70 bar, more typically at least 73 bar~~);
- ii. cooling the pressurised flue gas stream from step (i) and forming a liquid phase; and
- iii. supplying the liquid phase to the underground storage region.

12. (Currently Amended) The method defined in ~~any one of the preceding claims~~ claim 1 includes supplying air from the air compressor of the gas turbine and producing oxygen in the plant during operating mode A.

13. (Original) An apparatus for generating power via a gas turbine and a steam turbine which comprises:

- a. a gas turbine having an air compressor, an expander, and a combustor;
- b. an air separation plant for producing oxygen;

- c. means for supplying the following feed materials to the combustor of the gas turbine: coal bed methane, oxygen from the air separation plant, air from the air compressor of the gas turbine, and flue gas produced in the gas turbine, all under pressure, for combusting the coal bed methane and using the heated combustion products and the flue gas to drive the gas turbine;
- d. a heat recovery steam generator for generating steam from water supplied to the steam generator by way of heat exchange with a flue gas from the gas turbine;
- e. a steam turbine adapted to be driven by steam generated in the steam generator; and
- f. a means for supplying (i) one part of a flue gas stream from the gas turbine that passes through the heat recovery steam generator to the combustor of the gas turbine and (ii) another part of the flue gas stream from the gas turbine that passes through the heat recovery steam generator to a suitable underground storage region, when the apparatus is operating with coal bed methane, oxygen from the air separation plant, and flue gas produced in the gas turbine being supplied to the combustor of the gas turbine.

14. (Original) The apparatus defined in claim 12 wherein the means for supplying one part of the flue gas stream to the combustor of the gas turbine and another part of the flue gas stream to the suitable underground storage region includes a means for converting the flue gas from a gas phase into a liquid phase to be supplied to the underground storage region.

15. (Currently Amended) The apparatus defined in claim 13 or claim 14 includes a means for supplying air from the air compressor of the gas turbine to the air separation plant as a source of oxygen.

16. (Original) A method of generating power via a gas turbine and a steam turbine which comprises:

- a. supplying compressed air from an air compressor of the gas turbine to an oxygen plant and producing oxygen gas;

- b. supplying coal bed methane, oxygen from the oxygen plant, and flue gas which is predominantly CO₂ produced in the gas turbine, all under pressure, to a combustor of the gas turbine and combusting the coal bed methane and using the heated combustion products and the flue gas to drive the gas turbine;
- c. supplying a hot flue gas stream produced in the gas turbine to a heat recovery steam generator and using the heat of the flue gas to generate steam by way of heat exchange with water supplied to the steam generator;
- d. supplying steam from the steam generator to a steam turbine and using the steam to drive the steam turbine; and
- e. supplying (i) a part of the flue gas stream from the gas turbine that passes through the heat recovery steam generator to the combustor of the gas turbine and (ii) another part of the flue gas stream from the gas turbine that passes through the heat recovery steam generator to a suitable underground storage region.